## Claims

What is claimed is:

1. A system for forming a hole through a compression area of a blow molded article, the system comprising:

a mold having at least a first mold part and a second mold part, the first and second mold parts adapted to move toward each other in a closing direction to close the mold and adapted to move apart in an opening direction to open the mold, the mold having a gap between the first mold part and the second mold part defining the compression area when the mold is closed;

a moveable outer core pin;

an outer bore disposed inside the mold and adapted to house the outer core pin therein, the outer bore and the outer core pin having a pin axis generally oriented transverse to the opening direction and the closing direction; and

a pin support disposed inside the mold adjacent the outer bore along the pin axis;

wherein an end face of the outer core pin and the pin support partially define boundaries of the gap; and

wherein the outer core pin moves toward and strikes the pin support along the pin axis to cut out a portion of the compression area during the blow molding process to provide a hole in the blow molded article.

2. A system according to claim 1, wherein the pin support is a stationary plate disposed in the mold along the pin axis and oriented perpendicular to the pin axis.

3. A system according to claim 1, wherein the end face of the outer core pin includes a sharp perimeter to cut the portion of the compression area when moving toward the pin support.

4. A system according to claim 1, further comprising an outer core pin actuator coupled to the outer core pin and adapted to move the outer core pin in the outer bore.

5. A system according to claim 1, the pin support comprising an inner core pin housing having an inner bore and an inner core pin adapted to move along the pin axis in the inner bore, the inner core pin having an end face defining a boundary of the gap opposite the end face of the outer core pin, wherein the inner core pin moves simultaneously and synchronously with the outer core pin when the portion of the compression area is removed during the blow molding process.

6. A system according to claim 5, further comprising an inner core pin actuator coupled to the inner core pin and adapted to move the inner core pin in the inner bore.

7. A system according to claim 6, further comprising an actuator coupled to the outer core pin and the inner core pin to move the outer core pin and the inner core pin.

8. A mold for forming a hole through a compression area of a blow molded article comprising:

an outer core pin moveably disposed in an outer bore and oriented along a pin axis, an end face of the outer core pin bearing against the compression area when formed in the mold; and

an inner core pin moveably disposed in an inner bore and oriented along the pin axis, an end face of the inner core pin bearing against the compression area opposite the end face of the outer core pin;

wherein the pin axis is oriented transverse to an open and close direction of the mold;

wherein the outer core pin and the inner core pin move in a reciprocating manner along the pin axis to a remove a portion of the compression area bounded by the end face of the outer core pin and the end face of the inner core pin to form the hole in the compression area.

9. A mold according to claim 8, further comprising an outer core pin actuator operatively coupled to the outer core pin and adapted to move the outer core pin in the outer bore.

10. A mold according to claim 8, further comprising an inner core pin actuator operatively coupled to the inner core pin and adapted to move the inner core pin in the inner bore.

11. A mold according to claim 10, the inner core pin actuator comprising an actuation rod having a cam adapted to engage a corresponding slot in the inner core pin, wherein rotation of the actuation rod provides rotation of the cam in the slot to move the inner core pin in the inner bore.

12. A mold according to claim 8, further comprising an actuator operatively coupled to the outer core pin and the inner core pin to move the outer core pin and the inner core pin.

13. A method of forming a hole through a compression area of a blow molded article, the method comprising the steps of:

providing a mold having mold halves adapted to close the mold when brought together and open the mold when moved apart, a cavity formed in the mold when the mold is closed, the cavity including a gap defining the compression area, the mold further including an outer core pin moveably disposed in an outer bore of the mold and oriented along a pin axis, wherein an end face of the outer core pin defines a first side of a portion of the compression area, and wherein the pin axis is oriented transverse to an open and close direction of the mold;

closing the mold by bringing the mold halves together;

blowing parison in the cavity, the blowing causing the parison to conform to the cavity to form the blow molded article;

moving the outer core pin in the outer bore, the moving causing the outer core pin to cut out a portion of the blow molded article in the compression area;

opening the mold by moving the mold halves apart; and

removing the cut out portion from the compression area.

14. The method of claim 13, wherein the step of moving the outer core pin in the outer bore comprises the steps of:

moving the outer core pin in the outer bore toward the compression area, the moving causing the end face of the outer core pin to cut through the compression area; and

retracting the outer core pin after the end face of the outer core pin strikes a stationary plate disposed in the mold, wherein the stationary plate defines a second side of the portion of the compression area, and wherein the second side is opposite the first side along the pin axis.

15. The method of claim 14, wherein the moving causes a sharp perimeter of the end face of the outer core pin to cut through the compression area, and wherein a concave area of the end face of the outer core pin houses the cut out portion of the compression area.

16. The method of claim 14, wherein moving and retracting the outer core pin is provided by an actuator being operatively coupled to the outer core pin.

17. The method of claim 13, wherein the step of moving the outer core pin in the outer bore comprises the steps of:

moving the outer core pin in the outer bore toward the compression area;

moving an inner core pin away from the compression area simultaneously with the movement of the outer core pin toward the compression area, the inner core pin moving in an inner bore along the pin axis and having an end face defining a second side of the portion of the compression area along the pin axis, the moving causing the portion of the compression area between the end face of the outer core pin and the end face of the inner core pin to be cut out from the compression area; and retracting the outer core pin and simultaneously retracting the inner core pin.

18. A method according to claim 17, wherein moving and retracting the outer core pin is provided by an outer core pin actuator being operatively coupled to the outer core pin.

19. A method according to claim 18, wherein moving and retracting the inner core pin is provided by the outer core pin actuator being operatively coupled to the inner core pin.

20. A method according to claim 17, wherein moving and retracting the inner core pin is provided by an inner core pin actuator being operatively coupled to the inner core pin.